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INSTITUTIONAL QUALITY AND FDI TO THE SOUTH AN ANALYTICAL APPROACH

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Institutional Quality and FDI to the South

An Analytical Approach*

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Abstract: We ask whether MNEs' experience of institutional quality and political risk within their "home" business environments influences their decisions to enter a given country. We set out an explicit theoretical model that allows for the possibility that firms from South source countries may, by virtue of their experience with poor institutional quality, derive a competitive advantage over firms from North countries with respect to investing in destinations in the South. We show that the experience gained by such MNEs of poorer institutional environments may result in their being more prepared to invest in other countries with correspondingly weak institutions.

Keywords: foreign direct investment, multinational enterprises, institutional quality

JEL codes: F23, O1

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1 Introduction

Foreign direct investment (FDI) was, for a long period, considered to be a phenomenon of developed, industrialised countries (the “North”). This was especially the case with respect to the nationality of the investing firms, who were almost entirely based in the North with developing countries (the “South”) being hosts to a significant share of inward FDI flows but investing little themselves in overseas markets. Our research was sparked by the fact that this picture of global FDI flows is no longer accurate. It remains true that the South attracts a significant share of the world’s FDI. Figure 1 illustrates that the South’s share of global FDI inflows, while widely fluctuating, has risen over the past forty years from around 20 per cent to nearer 40 per cent of total FDI (UNCTAD, 2011).

INSERT FIGURE 1 NEAR HERE

Perhaps more significantly, the South has also become an established source of FDI. Figure 2 shows the the global share of FDI outflows attributable to firms from the South over the past forty years. In 1970, the South did indeed provide a negligible amount of the world’s FDI flows but its share has steadily risen such that, at the end of the first decade of the twenty-first century, the South contributed over 20 per cent of global FDI flows. Aykut and Ratha (2004) report that more than one third of total FDI inflows reported by developing countries now come from other developing countries, while for some small developing countries South-South flows amount to 90 per cent of the total FDI attracted.

INSERT FIGURE 2 NEAR HERE

While there is a wealth of theoretical and empirical literature that models FDI, this has focused on FDI coming from the North. There is a lack of literature that examines both FDI originating from the North and that from the emerging and developing multinational enterprises (MNEs) in the South. It would be useful to be able to establish whether these new

FDI outflows from the South differ in character from those traditionally arising in the North. Instead, many theoretical studies fail to incorporate mechanisms that could potentially explain the circumstances that emerging MNEs can exploit to give rise to an expected advantage in developing countries, while the vast majority of empirical studies still employ datasets that omit flows emanating from the South, so can investigate only North-North and perhaps North-South FDI flows. Alongside this, the established literature on outward FDI from the South is predominantly descriptive in nature and, as such, can only offer assertion on possible drivers of the outward FDI flows, or sometimes present evidence from specific case studies. In short, to date there is very limited use of theoretical and econometric analysis that both proposes and tests specific hypotheses of how North-South and South-South flows differ, or that seeks to identify and quantify the strongest and most significant determinants of South-South FDI flows.

Existing studies have progressively given more weight to political and institutional determinants of FDI flows, and emphasise the importance of “good” institutions. However, to the extent that these studies have confronted data, they have primarily been directed at explaining why some South countries may find it hard to attract inward FDI flows. Among others, Wei (2000) and Globerman and Shapiro (2002, 2003) present empirical evidence on the negative impact of poor institutions/public governance on attracting FDI. Similarly Daude and Stein (2007) find that better institutions have a positive and economically significant effect on FDI, with the unpredictability of laws, regulations and policies, excessive regulatory burden, government instability and lack of commitment playing a major role in deterring FDI. That FDI flows into some high risk South countries have increased, despite poor institutions and public governance, is something of a paradox in this context.

However, a smaller set of studies have suggested that there may be a divergence in the impact of these risk factors on different investors. For example, Aykut and Goldstein (2006)

suggest that experience with similar conditions to those in the chosen host country can result in lower risk aversion and hence make emerging MNEs more willing to enter “conflict zones” . In addition, Cuervo-Cazurra (2006), Cuervo-Cazurra, Maloney and Manrakhan (2007) and Cuervo-Cazurra and Genc (2008) have suggested that superior knowledge of how to operate in “challenging environments” is among potential advantages of emerging MNEs relative to those from the North. They assert that some emerging MNEs are likely to have acquired the ability to operate in a particular institutional environment over time in a learning-by-doing manner, while their counterparts in the North are likely to both lack this experience and to have to overcome “deep seated assumptions about operating in an international environment”.³ However, although these verbal arguments have been made, they have yet to be systematically incorporated into theoretical models and comprehensively tested using appropriate data.

The present paper can be seen as filling this gap. We model explicitly how MNEs’ experience of institutional quality and political risk within their “home” business environments influences their decisions to enter a given country. Our particular interest is in determining whether the increasing role played by multinational enterprises (MNEs) from the South is reflected in FDI in different investment environments. We ask whether the experience gained by such MNEs of poorer institutional environments has resulted in their being more prepared to invest in other countries with correspondingly weak institutions, as compared to MNEs from the North. Put simply, we ask whether investors from countries that have experienced poor domestic institutional quality are less deterred by country risk abroad.

Javorik and Wei (2009) propose an alternative analytical model, but their focus is on the entry mode adopted by an MNE in the face corruption in the host country, finding that corruption tilts the choice towards joint ventures. They argue that having a local partner cuts through the bureaucratic maze associated with a corrupt environment. In this paper, we analyse

³For a related discussion see World Bank (2005).

the choice of location for MNEs, taking into account the quality of institutions in both the firms' home countries and the potential destinations for their FDI.⁴

This broader perspective suggests that the specific advantages of firms from the North are less valuable, or deflated, in the South since they require better developed markets and a stable, low risk, contracting environment. To the best of our knowledge, these arguments have not previously been formalised in a theoretical model. This is the contribution we offer in this paper.

In the next section we set out a simple analytical model of FDI flows in which an MNE makes its choice of host based upon a comparison of the expected present value of profit achievable in each potential host country, taking into account institutional quality in both source and host nations. We quickly extend this model to incorporate the risk that the production facility in the host country will cease to return a profit to its owners. Importantly, we allow the source country's previous experience with institutional risk at home to influence its perception of risks inherent in investing in other nations. Thus we explicitly allow for the likelihood that a firm that has faced institutional difficulties in its home country will have developed the skills that render similar problems overseas less problematic, relative to investors from other nations who have not been exposed to such risks. We show that poorer institutions in a potential host country make the expected return from FDI in that location less attractive. However, the greater the source country's past experience of poor performance at home, the better able it is to cope with the risk to its FDI.

Having demonstrated the inherent trade-offs that cause some firms to abandon a particular destination, but allow that destination to continue to attract more experienced investors, we conclude with a discussion of the empirical implications of our analysis.

⁴In our companion paper (Darby, Desbordes and Wooton, 2009), we take an empirical approach to determine whether institutional quality is a determinant of FDI flows.

2 A simple analytical model

We develop a simple model of FDI in which an MNE operating in a particular industry and based in source country s chooses amongst a number of countries as potential hosts for its overseas production facilities. It will make its choice based upon a comparison of the expected present value of profits from production in each potential host, taking into account institutional quality in both source and host nations.

A production facility in host country h will generate a flow of after-tax profits in each period equal to Π_{sh} . For a firm from source country s , we define the gap between profits from locating in country i and country j as country i 's "geographical advantage":

$$\Gamma_{sij} \equiv \Pi_{si} - \Pi_{sj}. \quad (1)$$

A broad range of factors may account for one country having a geographic advantage over another nation as the host for a firm's FDI. Differences in the economic environments of host nations may arise with respect to: their rates of corporate taxation; the costs of local inputs into production such as labour; the sizes of their domestic markets; their levels of development (and resulting ability to assimilate the firm's technology), etc. We do not model the reason behind these differences but merely accept that firms will find some investment locations more attractive than others. Clearly, the geographic advantage enjoyed by a potential host in one industry may not carry over to all sectors of the economy.

The investment made by the MNE is expected to be productive and last into the future. Consequently, the firm will look at the present value of the expected stream of current and future profits. Assume, for now, that there is no risk involved in the FDI and that the plant is expected to maintain production (and profitability) indefinitely. The present values of the terms in (1) are

$$PV(\Pi_{sh}) = \frac{\Pi_{sh}}{1 - \delta}, \quad (2)$$

$$PV(\Gamma_{sij}) = \frac{\Pi_{si} - \Pi_{sj}}{1 - \delta}, \quad (3)$$

where δ is the discount rate of the firm.⁵ When investments have the same expected longevity, accounting for the future leaves the firm's optimal choice of location for its FDI unchanged. We now consider the implications of international differences in the expected lifetimes of foreign production facilities.

2.1 Institutional risk

The life of the MNE's overseas plant may be cut short for many reasons. We focus on problems with respect to the institutions in the host country. We suppose that there is a risk ρ_h in every period that the production facility in host country h will cease to return a profit to its owners in source country s . This may arise because of some catastrophic breakdown in the host country's economy such that the firm is unable to continue producing. Alternatively, production may carry on but ownership of the firm is expropriated by the host country's government. This risk, if it differs between source countries, will figure in the MNE's calculations as to its preferred production location. We identify two influences on the MNE's assessment of where it might best invest, labelling them the *demonstration effect* and the *experience effect*. The former of these would provide an explanation for repeated instances of FDI flows between any two particular nations while the latter seeks to explain why MNEs from different countries may choose different recipients of their FDI. We consider each in turn.

In determining where to invest, a firm would want to take into account a broad range of characteristics of each potential-host country's economy, including the risk to the FDI associated with poor institutional quality. However, there may be some factors that are not readily apparent to a potential investor and that would affect the expected profitability of producing in a particular country. Suppose that there are two potential hosts, identical in every

⁵We ignore international differences in discount rates.

observable respect (including risk), except that one of the countries is already host to FDI from the same source country as that of the firm. The MNE might then be able to elicit information from its compatriot about local investment conditions, lowering the perceived risk to FDI in that country. Even in the absence of such knowledge transfer, the observation that an enterprise from its own country has set up in a particular host might be sufficient for an MNE to infer that market conditions in that particular location are relatively more favourable to firms with similar backgrounds. Thus, the *demonstration effect* captures the impact on a firm's FDI decision of the presence of an existing investment by source country s in host country h . A positive demonstration effect would arise if, *ceteris paribus*, a firm were more likely to invest in a nation that was already host to FDI from the same source country. The demonstration effect would operate through mitigating the perceived risk to a firm in country s of investing in country h ,

$$r_{sh} = \theta \left(\frac{fdi_{sh}}{FDI_h} \right) \rho_h$$

where fdi_{sh} is the existing level of investment between the two countries, FDI_h is the total level of investment in host country h , and $0 < \theta(\cdot) \leq 1$. Any evidence of FDI in a country, from whatever source, is likely to make a potential investor less concerned about problems with governance in that location but the demonstration effect would be reflected in a firm being more confident of its success in a potential host when a large proportion of existing investment has come from the firm's home country. Thus, we would expect the first derivative of $\theta(\cdot)$ to be negative.⁶

We are particularly interested in determining whether the source country's exposure to poor institutions at home has an influence on its perceptions of the risk inherent in investing in other nations. It may be the case that a firm having faced institutional difficulties at home will

⁶Of course, the familiarity between nations, that results in this sort of clustering of one nation's FDI in a particular host in the South, may be reinforced by political and cultural ties, such as former or continuing colonial links.

have developed skills that render similar problems overseas less problematic, relative to investors from other nations who have never been exposed to such risks. Thus, our *experience effect* captures the impact of past exposure to institutional risk on a source country's willingness to engage in FDI in a less-than-secure investment environment. We define ε_{sh} as the subjective probability of investing country s that FDI in country h will shut down in the current period. This can be modelled as

$$\varepsilon_{sh} \equiv (1 - e_s^\alpha) r_{sh}, \quad (4)$$

where e_s is the source country's experience of past, domestic, institutional risk, $e_s < 1$ and $\alpha > 0$. For a host that is perceived to be free of risk ($r_{sh} = 0$), the firm's experience of dealing with poor institutions is irrelevant. Should the potential host be seen to have an uncertain investment climate ($r_{sh} > 0$), an investing firm with relatively more experience of institutional risk will have greater confidence in FDI in country h than a firm based in a country with a less checkered past. Thus source country experience of poor institutions mitigates the institutional risk in the host country.

We can rewrite (2), using (4) to incorporate risk, such that the expected present value of the profit stream to a firm from country s arising from FDI in country h is

$$EPV(\Pi_{sh}) = \frac{\Pi_{sh}}{1 - \delta + \delta \varepsilon_{sh}}. \quad (5)$$

The partial derivatives of (5) are

$$\begin{aligned} \frac{dEPV(\Pi_{sh})}{dr_h} &= \frac{-\delta(1 - e_s^\alpha)\Pi_{sh}}{[1 - \delta + \delta \varepsilon_{sh}]^2} < 0, \\ \frac{dEPV(\Pi_{sh})}{de_s} &= \frac{\delta \alpha e_s^{\alpha-1} r_h \Pi_{sh}}{[1 - \delta + \delta \varepsilon_{sh}]^2} > 0. \end{aligned}$$

Thus poorer institutions in the potential host country lower the expected stream of profits, making FDI in that location less attractive. The greater the source country's experience of poor

institutions at home, the better it perceives it will be able to cope with risk to its FDI.

Now consider the firm's investment choice between the two potential host countries, 1 and 2. The firm will consider the expected present values of the two locations and will choose country 1 over country 2 if

$$EPV(\Gamma_{s12}) = \frac{\Pi_{s1}}{1 - \delta + \delta\epsilon_{s1}} - \frac{\Pi_{s2}}{1 - \delta + \delta\epsilon_{s2}} > 0. \quad (6)$$

Rewriting expression (6), separating the risk elements, yields

$$EPV(\Gamma_{s12}) = PV(\Gamma_s) + \frac{\delta[(1 - \delta + \delta\epsilon_{s1})\epsilon_{s2}\Pi_{s2} - (1 - \delta + \delta\epsilon_{s2})\epsilon_{s1}\Pi_{s1}]}{(1 - \delta)(1 - \delta + \delta\epsilon_{s1})(1 - \delta + \delta\epsilon_{s2})}. \quad (7)$$

This decomposition indicates that any geographic advantage that country 1 might enjoy is mitigated if country 2 is perceived to be a relatively safer investment environment.

2.2 Different hosts for different sources?

We have already established that source-country experience of poor institutional quality can be beneficial for FDI in hosts with poor institutions, but such experience is of no use for FDI in risk-free host countries. Thus there is the potential for firms, that are in all other respects identical save for their institutional experience, to perceive potential FDI returns differently when the hosts differ in institutional quality. Suppose that there are two firms from different source countries, *A* and *B* and that, for simplicity, we assume that the demonstration effect is either absent or the same for both firms. This allows us to omit the host-country subscript on the perceived risk term. The two potential hosts differ in that country 2 is completely safe but FDI in country 1 carries some risk, that is $r_1 > r_2 = 0$. We further assume that country *B* has had a more turbulent past than has rock-solid country *A*, that is $e_B > e_A = 0$. This allows us to rank the perceived levels of risks associated with source and host pairs of nations:

$$r_1 = \epsilon_{A1} > \epsilon_{B1} > \epsilon_{A2} = \epsilon_{B2} = r_2 = 0.$$

This characterisation of the four countries might be consistent with source country *A* being

from the “North” while source country B is from the “South”. With regard to the potential destinations for FDI, host country 2 could be considered more “Northern” than host country 1 due to its more robust institutional framework.⁷

We can then re-write (7) as

$$\begin{aligned} EPV(\Gamma_{A12}) &= PV(\Gamma_{A12}) - \frac{\delta r_1 \Pi_{A1}}{(1-\delta)(1-\delta + \delta r_1)}, \\ EPV(\Gamma_{B12}) &= PV(\Gamma_{B12}) - \frac{\delta \varepsilon_{B1} \Pi_{B1}}{(1-\delta)(1-\delta + \delta \varepsilon_{B1})}. \end{aligned} \tag{8}$$

Suppose that, in the absence of uncertainty, the two firms would be equally profitable in the same host nation, that is, $\Pi_h = \Pi_{Ah} = \Pi_{Bh}$ for $h = \{1, 2\}$. Assume also that country 1 has a geographic advantage, such that $PV(\Gamma_{A12}) = PV(\Gamma_{B12}) > 0$. The second terms of the expressions in (8) are positive and thus the risk associated with FDI in country 1 will always offset its geographic advantage to some degree. Indeed, if FDI in country 1 is particularly risky, the relative stability of country 2’s institutions might be sufficiently large that it attracts FDI from both firms. However, country B ’s firm has been exposed to poor institutions, making it better able to deal with any problems in country 1. Thus it may choose to invest in that location, if geographic advantage is large enough to offset the increased risk of closure, while country A ’s firm opts for the more secure environment of country 2.

Maintaining our assumptions regarding the institutional experiences of the four countries in question, we illustrate the circumstances under which each source country would choose FDI in the lower profit, risk-free host over investing in the riskier, but potentially more profitable, nation.⁸ Consider first how varying the experience with risk on the part of the firm changes the relative attractiveness of the two locations.

⁷This labeling convention that we have adopted, while rather crude, captures an important stylized fact that the more-established industrialized economies of the North tend to have better institutions and have had this high institutional quality for some time as compared to newly industrializing nations of the South.

⁸We use the following parameter values: $\Pi_{s1} = 1.0$, $\Pi_{s2} = 0.8$, $\delta = 0.9$, $r_1 = 0.1$, $r_2 = 0$, $e_A = 0$, $e_B = 0.8$ and $\alpha = 1$.

INSERT FIGURE 3 NEAR HERE

This is illustrated in Figure 3 which traces $EPV(\Gamma_{s12})$ as the experience of the source country changes. When $EPV(\Gamma_{s12}) > 0$, the higher return in host country 1 more than offsets the greater risk associated with investing in that country. The less experience a firm has of dealing with investment risk, the less able it is to deal with the poor institutional framework in the higher return country and it would choose low-risk country 2 instead.

Effectively, a country with greater experience of host-country institutional problems is more willing to invest in a risky climate relative to placing its FDI in a safer host that has a lower return. In Figure 4, we illustrate the cases under which each source country may choose a different host for its investment and when they co-locate.

INSERT FIGURE 4 NEAR HERE

The lower line represents $EPV(\Gamma_{B12})$ while the upper line shows $EPV(\Gamma_{A12})$. When country 1 is as safe as its rival location for FDI, both firms will choose to invest there to take advantage of the higher profitability. The benefits for both firms from investing in country 1 begin to be eroded as that country's riskiness increases, but the impact will be more severe for the firm from country A, which has no experience of dealing with poor institutions. Thus higher risk in country 1 will eventually make country 2 the preferred location for the FDI of both firms. There will, however, be a range of levels of risk in country 1 at which the more-experienced firm from source country B will choose to invest there, while country A's firm, with little experience of poor institutions, will abandon country 1 for the security of investing in the less risky location of country 2.

3 Discussion and conclusion

This paper addresses a gap in the existing literature by providing an explicit theoretical model that encompasses key determinants of North-South and South-South FDI. While a number of

authors have discussed the possibility that experience with risk may be a feature of emerging MNEs' firm-specific advantage, to the best of our knowledge our paper is the first to formalise this hypothesis within an explicit theoretical model. Specifically we have set out an explicit theoretical model that allows for the possibility that firms from South source countries may, by virtue of their experience with poor institutional quality, derive a competitive advantage over firms from North countries with respect to investing in destinations in the South.

Our paper addresses, to some degree, the paradox that while existing studies have found that the existence of "good" institutions in a host nation is a strong, positive determinant of its ability to attract FDI, nevertheless there is clear evidence of increasing FDI flows into South countries, despite many of these nations having poor institutions and public governance. We identify both a *demonstration effect* and an *experience effect*, each of which (acting in tandem) will have an impact on the pattern of FDI into host nations in the South. The demonstration effect arises when a firm's perception of a potential host for its FDI is favourably impacted by the presence of production facilities of firms from its own country, as the firm becomes more confident in its ability to deal with a difficult investment given that its compatriots appear to have weathered any problems that have arisen. This willingness to invest in a risky environment is reinforced by the experience effect, where a firm's exposure to poor institutions in its home country has better prepared it to override any such hurdles overseas, as compared to a firm that has not had to deal with domestic governance problems.

In our companion paper (Darby, Desbordes and Wooton, 2009), we find empirical support for the experience effect. In future empirical work, we hope to identify both effects in the data and establish just how important institutional quality is for firms' FDI decisions.

4 References

- Aleksynska, Mariya, and Olena Havrylchyk, (2011) "FDI from the South: the role of institutional distance and natural resources." CEPII Working Paper 2011-05, March.
- Aykut, Dick and Dilip Ratha, (2004) "South-South FDI flows: How big are they?" *Transnational Corporations*, 13, 149-76.
- Cuervo-Cazurra, Alvaro, (2006), "Who cares about corruption?" *Journal of International Business Studies*, 37, 807-822.
- Cuervo-Cazurra, Alvaro, Mary M. Maloney and Shalini Manrakhan, (2007), "Causes of the difficulties in internationalization." *Journal of International Business Studies*, 38, 709-725.
- Cuervo-Cazurra, Alvaro, and Mehmey Genc, (2008), "Transforming disadvantages into advantages: Developing-country MNEs in the least developed countries." *Journal of International Business Studies*, 39, 957-979.
- Darby, Julia, Rodolphe Desbordes and Ian Wooton, (2009), "Does public governance always matter? How experience of poor institutional quality influences FDI to the South." CEPR Working Paper 7533, November.
- Daude, Christian, and Ernesto Stein, (2007), "The quality of institutions and foreign direct investment." *Economics and Politics*, 19: 317-344.
- Globerman, Steven, and Daniel Shapiro, (2002), "Global foreign direct investment flows: The role of governance infrastructure." *World Development*, 30, 1899-1919.
- , (2003), "Governance infrastructure and US foreign direct investment." *Journal of International Business Studies*, 34, 19-39.
- Javorcik, Beata S., and Shang-Jin Wei, (2009), "Corruption and cross-border investment in emerging markets: Firm-level evidence." *Journal of International Money and Finance*, 28, 605-624.

UNCTAD, (2011), “Inward and outward foreign direct investment flows, annual, 1970-2009.”

UNCTADstat, <http://unctadstat.unctad.org>.

Wei, Shang-Jin, (2000), “How taxing is corruption on international investors?” *The Review of Economics and Statistics*, 82, 1-11.

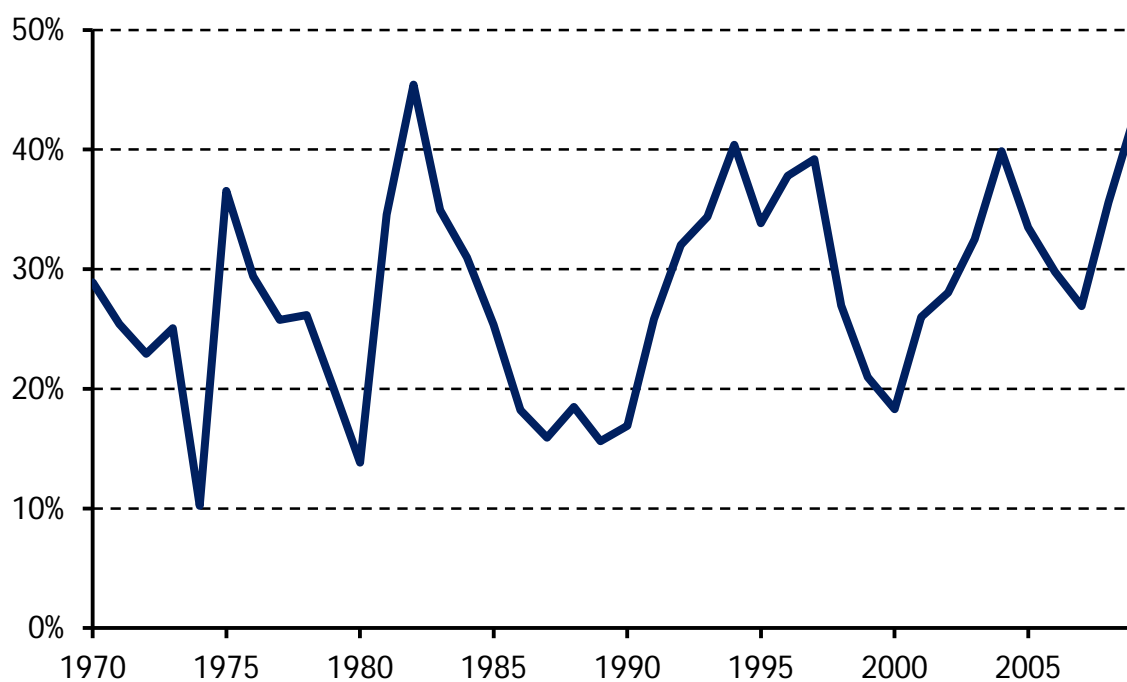


Figure 1. South's share of global FDI inflows

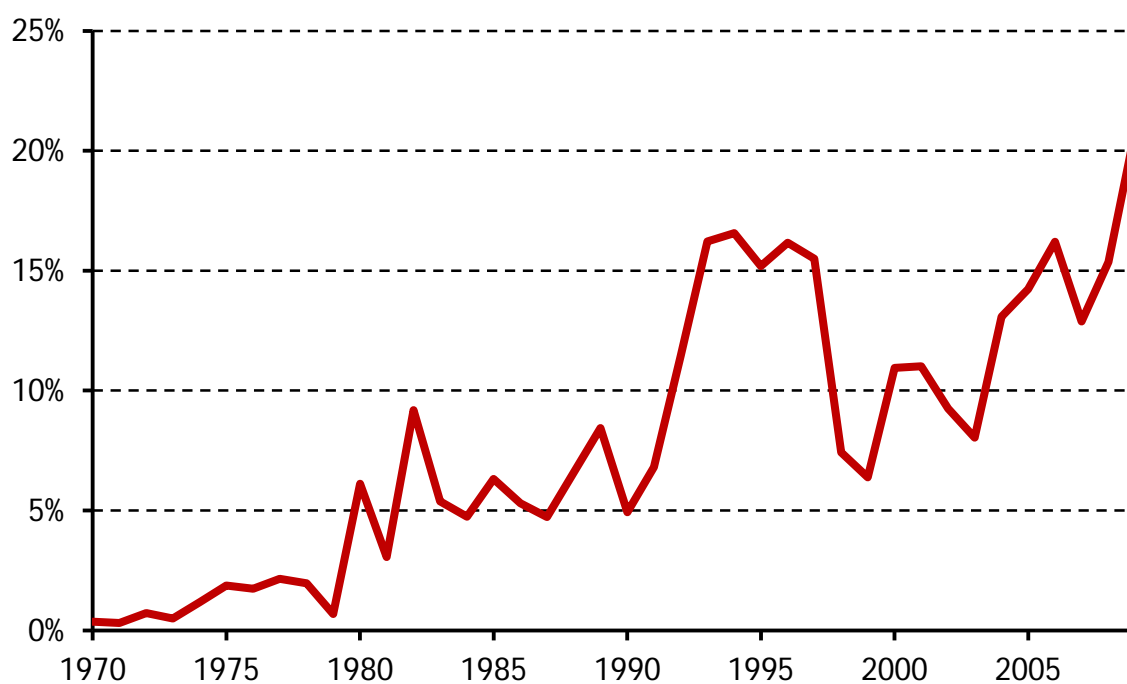


Figure 2. South's share of global FDI outflows

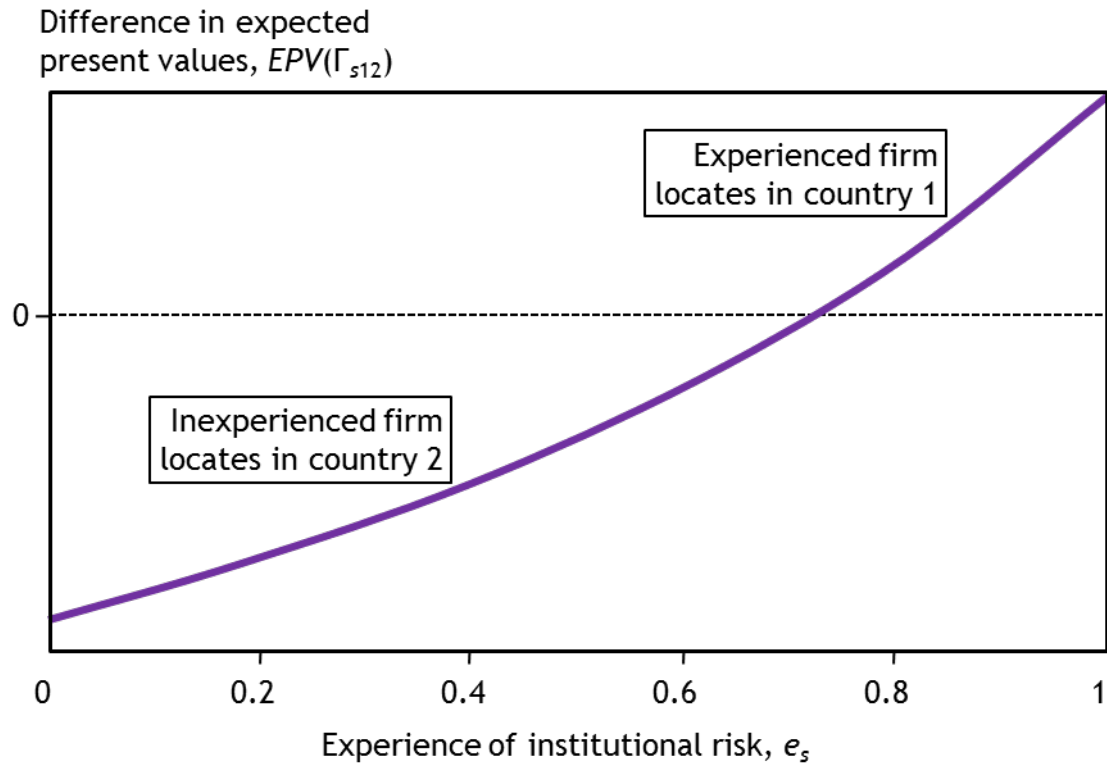


Figure 3. Impact of experience on firm location

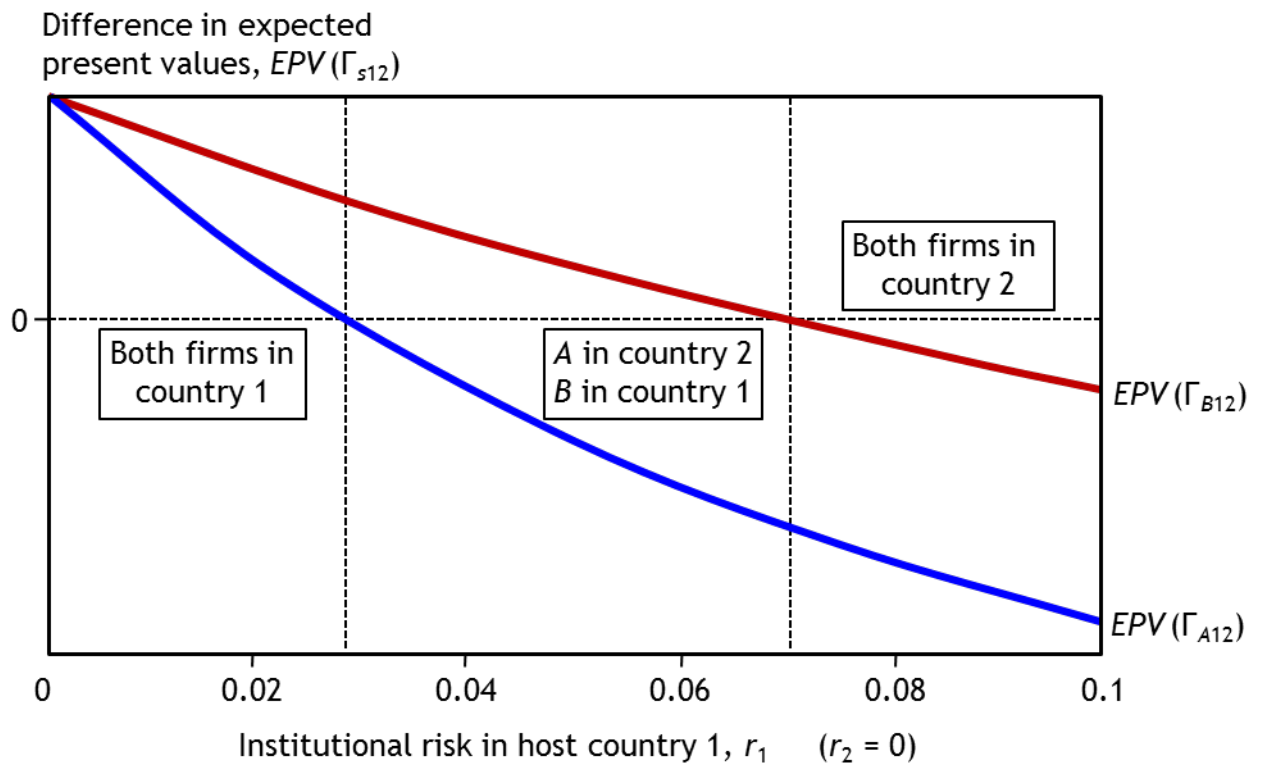


Figure 4. Interaction between risk and experience